

New Species of Moss Mites of the Genus *Eupterotegeus* from the Western United States (Oribatei: Cepheidae)

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During recent studies on the cepheid mites of the western United States, two undescribed species of *Eupterotegeus* Berlese 1908, were discovered among collections of moss mites from Colorado, Utah, and Washington. These new species are described below.

Eupterotegeus rostratus, n. sp. (Figs. 1, 2)

Diagnosis: Rostrum flat, with small median spine and rounded corners subequal in length; lamellae large, projecting over and beyond rostrum, with broadly rounded lateral margins; dorsum of hysterosoma covered with circular pits.

Description: Dark reddish-brown color; propodosoma about a third as long as hysterosoma and approximately as wide as long; rostrum flattened, translucent, with small median spine in anterior margin and rounded corners of about equal length, a faintly sclerotized transverse line crossing rostrum posterior to insertion level of rostral hairs; rostral hairs simple, nearly as long as width of rostral tip, inserted in rounded antero-lateral corners of rostrum; a faint, sclerotized channel extending from these insertions distally and medially; lamellae nearly four times as long as wide, with nearly parallel margins, except for distal tips, covering lateral margins of propodosoma, anterior margins incurved, median dorsal surface of lamellae with small, longitudinal carina extending from pseudostigmata to base of insertions of lamellar hairs, surface of lamellae pitted; lamellar hairs simple, as long as width of lamella at level of translamella, decurved and incurved, extended beyond anterior tip of lamellae, inserted in anterolateral edge; translamella interrupted medially;

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interlamellar hairs simple, weak, inserted near medial margin of lamellae at level of pseudostigmata; pseudostigmata prominent, heavy, vase-shaped, with roughened edges, as long as width of lamella, aperture one-fourth as wide as lamella, directed antero-laterad, internal spiral lining pronounced; pseudostigmatic organ shorter than distance between pseudostigmata, bent sharply at aperture of pseudostigmata, pedicel smooth, tapered to a slightly swollen, finely setose head; tectopodia I moderately heavy, directed forward, roughly pitted; tectopodia II about one-half as large as tectopodia I; exobothridial hairs not seen in type specimen; posterior surface with several chitinous knobs near dorsosejugal suture.

Hysterosoma round, with numerous circular pits in integument, antero-lateral pteromorphs roughened, projected beyond level of dorsosejugal suture; dorsosejugal suture with straight anterior margin, indented near antero-lateral corners; ten pairs of marginal dorsal setae, each borne on a small tubercle as shown in Figure 1; numerous areae porosae near medial-posterior margin of hysterosoma.

Camerostome egg-shaped, mentum weakly sclerotized on anterior margin, heavily sclerotized posteriorly, with lateral internal condyles near posterior border; apodemata I curved anteriorly near lateral edge at level of tectopodia I; ventral sclerotization and setae as shown in Figure 2; genital opening round, located between apodemata IV, each cover with six, short, fine setae along medial margin; anal aperture trapezoidal, a third larger than genital opening, with a short, flattened preanal piece; each anal cover with two setae, a:1 inserted in anterior third of cover, a:2 inserted in posterior fourth of cover; four adanal setae, ada:1 and ada:2 near posterior margin of anal aperture, each inserted in raised tubercle; ada:3 and ada:4 without tubercles, ada:3 lateral to widest part of cover, ada:4 near anterior end of anal aperture, all adanal setae inserted in margin of sclerotized perianal ring surrounding anal aperture, a few circular depressions in margin of band.

Entire body and legs covered with a thickened cerotegument. Legs with only slightly heterotridactylous tarsi.

Length $612\ \mu$ including lamellae, hysterosoma $570\ \mu$; width $360\ \mu$.

The holotype and five paratype specimens were collected from Bennett Creek Camp Ground, Pingree Park, Larimer County, COLORADO, 14 August 1954 by T. A. Woolley; five specimens from Chinney Park Camp, Medicine Bow National Forest, Wyoming, 16 August 1958 by T. A. Woolley; two specimens from Neah Bay, Washington, 23 August 1956, by H. and M. Higgins; one specimen collected from Toponas Creek Camp Ground, Gore Pass, Colorado 26 July 1956 by H. and M. Higgins. The holotype and one paratype will be deposited in the U. S. National Museum.

Eupterotegeus spinatus, n. sp. (Figs. 3, 4)

Diagnosis: Similar to *E. rostratus* but with a distinct translamella and a strong, median translamellar spine between lamellae; dorsal integument of hysterosoma roughly reticulate.

Description: Reddish-brown in color; propodosoma triangular in outline, about as wide as long, with several sclerotized knobs near dorsosejugal suture; rostrum only partially visible from above, the corners projecting from beneath translamellar spine, rostral hairs about as long as width of rostrum, curved, inserted in corners of rostrum; lamellae half as broad as width of propodosoma, lying over lateral margins of propodosoma, with straight medial margins and undulating lateral margins, anterior cusps twice as long as interlamellar spine, projected anteriorly beyond rostrum, tip broadly rounded laterally, culminated in a sharp point, a longitudinal sclerotized carina extending from base of lamellar hairs to median edge of lamellae posterior to translamella; lamellar hairs short, simple, decurved, inserted in anterior edge of cusp, diameter of insertion areolae larger than diameter of hairs, coalesced with longitudinal sclerotized carina on dorsum of lamellae; translamella extended between lamellae at level of distal third of lamellae, with a stout, slightly curved median spine about half as long as lamellar cusp, extended beyond tip of rostrum; interlamellar hairs short, simple, curved, inserted about their lengths mediad of lamellae at level of ante-

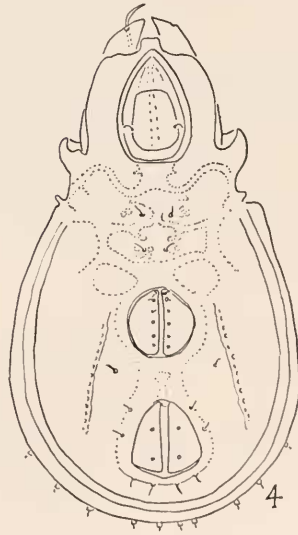
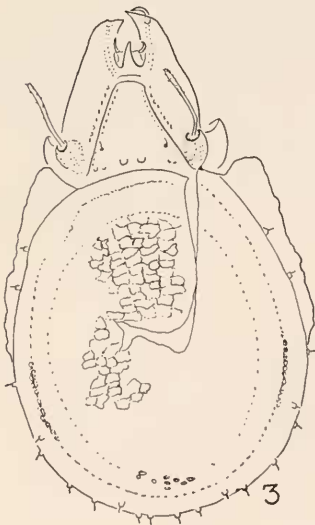
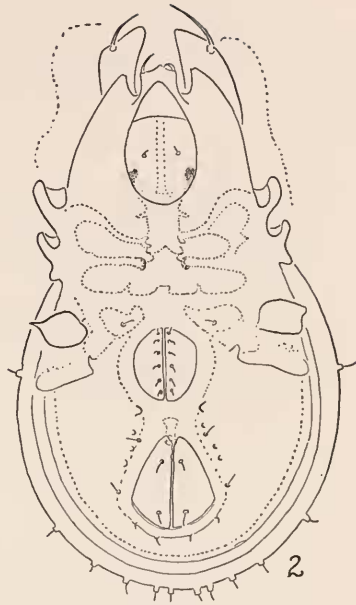
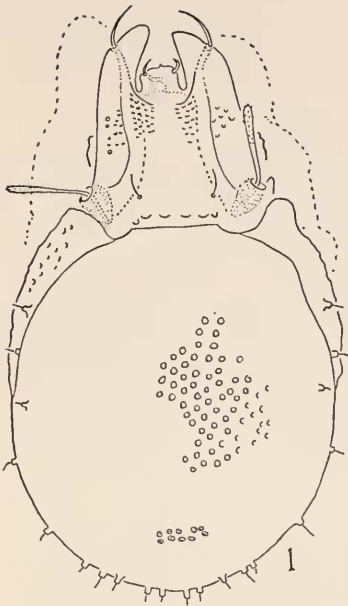
rior margin of pseudostigmata; pseudostigmata heavily sclerotized, vase-shaped, with roughened aperture and prominent internal sclerotization; pseudostigmatic organs shorter than the distance between pseudostigmata, about three times as long as lamellar hairs, of fairly uniform diameter, distal tip finely setose; tectopodia I large, directed anteriorly at level of pseudostigmata; no exobothridial hairs observed in type specimen.

Hysterosoma oval, with roughened antero-lateral pteromorphs projected anteriorly beyond level of rounded dorsosejugal suture; surface roughly reticulate, with a distinct rectangular pattern; ten pairs of short dorsal, marginal setae, each seta borne on a raised tubercle; numerous areae porosae around lateral margins and posteriorly as shown in Figure 3.

Camerostome egg-shaped, with heavy, sclerotized mentum extended two-thirds the length anteriorly; camerostomal setae as seen in Figure 4; apodemata strongly sclerotized, as shown in Figure 4; apodemata IV extended to sclerotized, perigenital ring; genital opening broadly trapezoidal, two-thirds its length anterior to anal aperture, each genital cover with six hairs, g:1 and g:2 close together near anterior margin of cover, g:3, g:4, g:5, g:6 subequally spaced along median margin; anal aperture about same size as genital aperture, anal plates narrower anteriorly, each cover with two setae; preanal piece prominent, extended anteriorly two-thirds the distance between genital and anal openings; aggenital seta inserted remote from genital aperture, but at level of anterior end of preanal piece; four pairs of adanal setae, ada:1 and ada:2 inserted posterior to anal opening, ada:3 and ada:4 inserted laterad of cover, ada:3 posterior to level of a:1 and ada:4 anterior to level of a:1, adanal setae inserted in sclerotized perianal ring which is continuous with sclerotized perigenital ring; a sclerotized longitudinal ridge in ventral plate lateral to genital and anal apertures.

EXPLANATIONS OF FIGURES

- FIG. 1. *Eupterotegeus rostratus*, n. sp., from the dorsal aspect.
FIG. 2. *Eupterotegeus rostratus*, n. sp., from the ventral aspect.
FIG. 3. *Eupterotegeus spinatus*, n. sp., from the dorsal aspect.
FIG. 4. *Eupterotegeus spinatus*, n. sp., from the ventral aspect.



Body and legs covered with a thick cerotegument; legs short, stout, with heterotridactylous tarsi; legs I and II reaching beyond anterior tip of lamellae.

Length to end of lamellae 594 μ ; length to end of rostrum 558 μ , hysterosoma 396 μ ; width 348 μ .

The type specimen was collected by H. Higgins from Diamond Fork Canyon, UTAH, 17 June 1956. This specimen will be deposited in the U. S. National Museum.

Discussion: The two new species of *Eupterotegeus* described above differ in the shape of the lamellae from *Eupterotegeus ornatissimus* (Berlese), 1908, as figured by Balogh (1961). In the latter the lamellae are rather narrow toward the distal half and with "shoe-shaped" apices, while in both *E. spinatus*, n. sp., and *E. rostratus*, n. sp., the lamellae are broader, with parallel sides, antero-lateral margins broadly rounded, and somewhat translucent cusps. The general shape of the body, the heavy, vase-shaped pseudostigmata, long pseudostigmatic organs and the peripheral dorsal hysterosomal setae are characteristics which justify, in the writers' opinions, the placement of these species in the genus *Eupterotegeus*.

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